WIRELESS AND MOBILITY DAY

Intel® Centrino™ Mobile Technology, Today and Tomorrow

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June 2nd, 2005

intel

Disclaimer

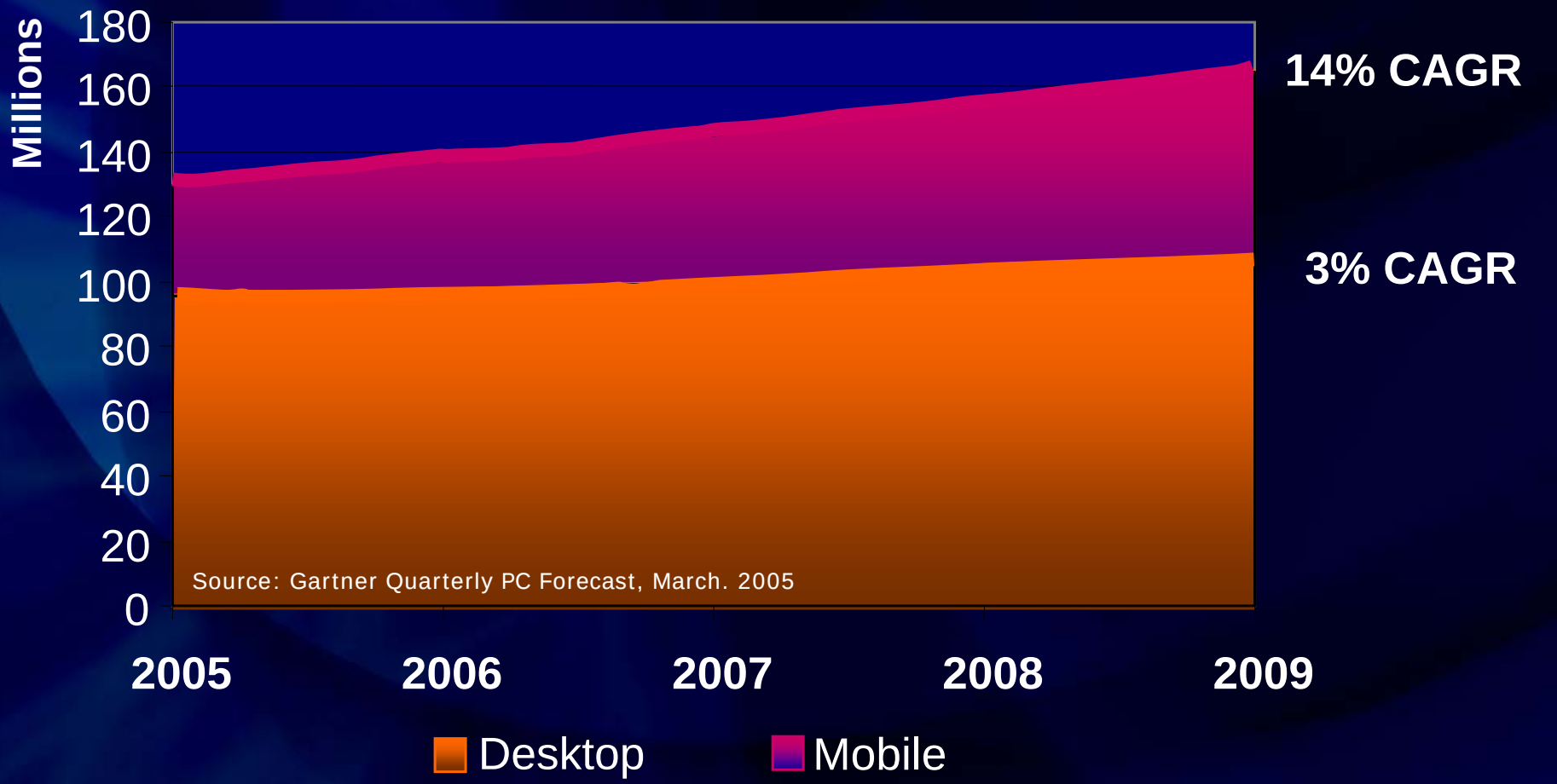
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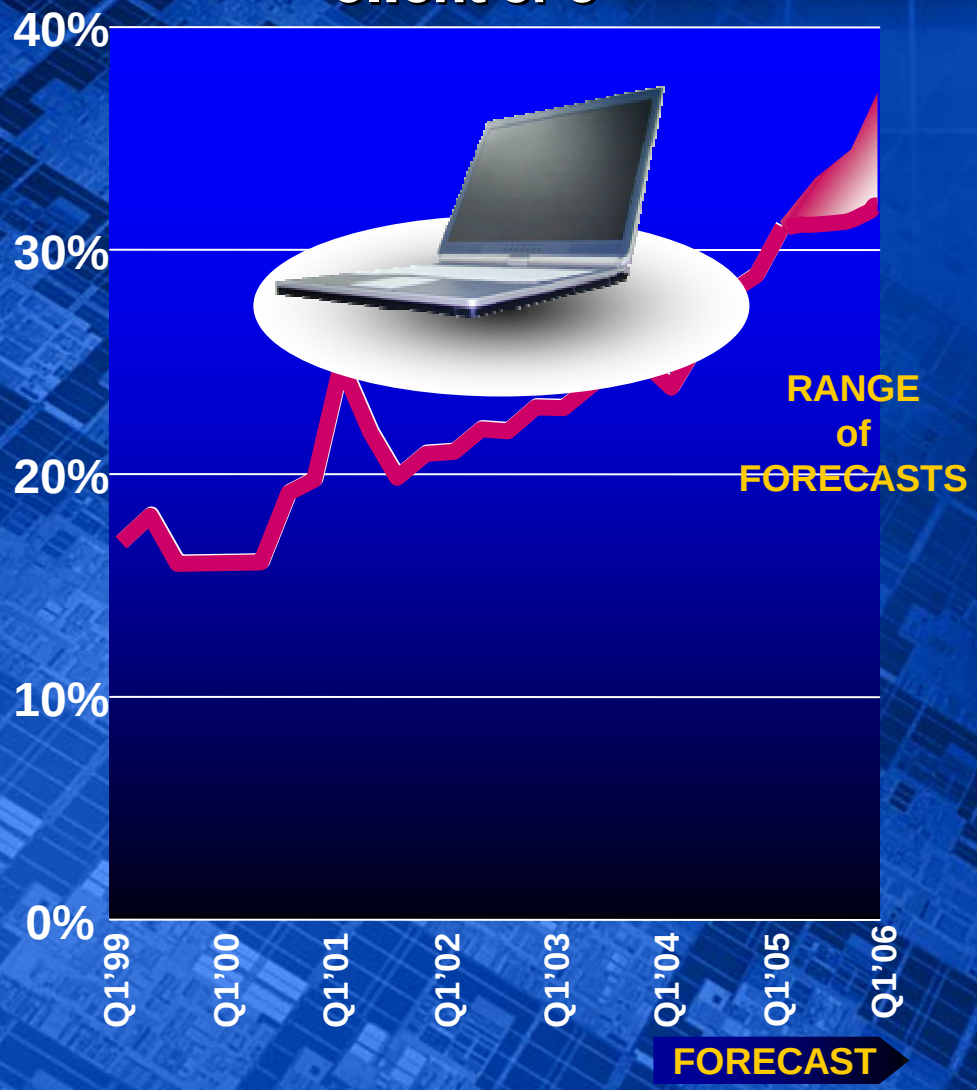
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Desktop vs. Notebook Growth



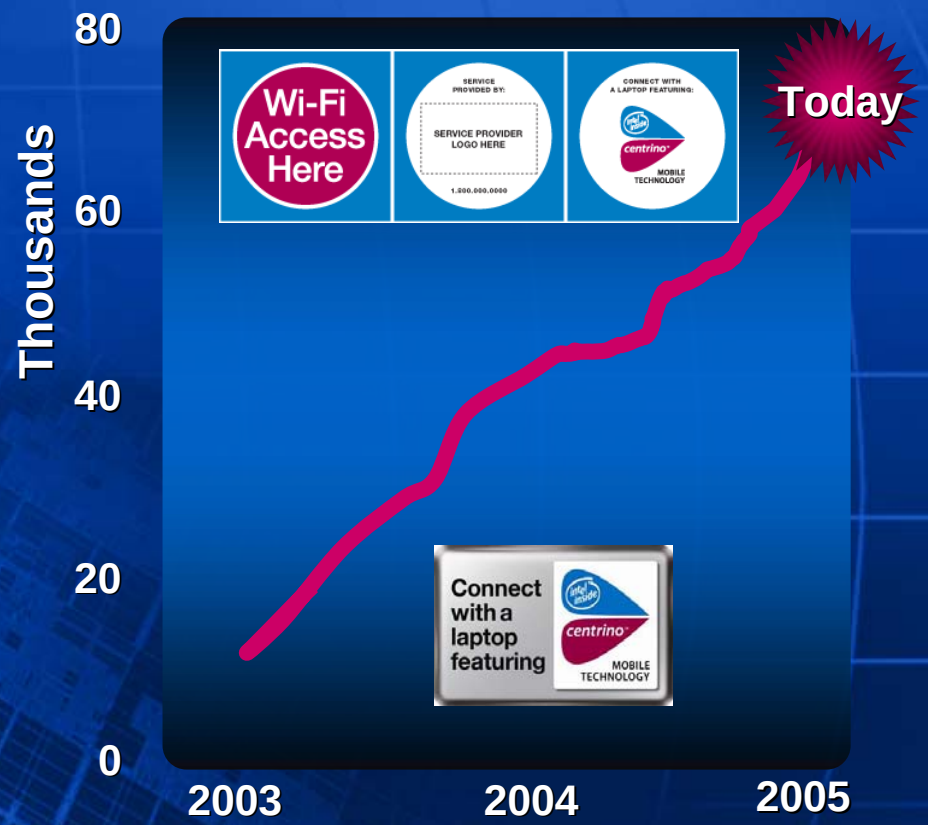
Shift to Mobility

Notebook PC Mix as % Intel Client CPU



Source: Intel internal

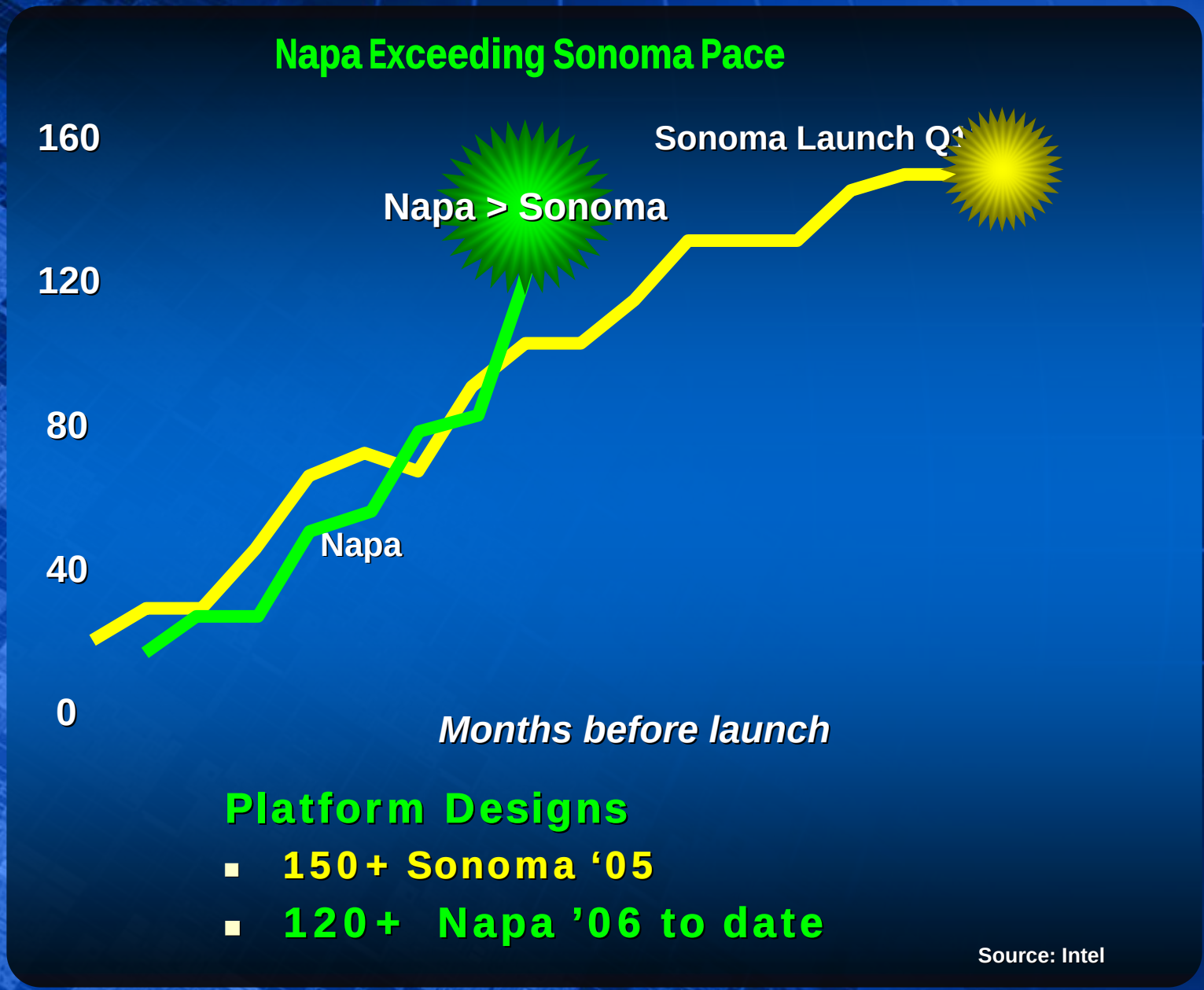
Intel® Centrino™ Mobile Technology Wireless Verified Hotspots continue to increase



70,000+ Verified Intel® Centrino™ Mobile Technology hotspots

www.intel.jiwire.com

Compelling Platforms, Strong Demand

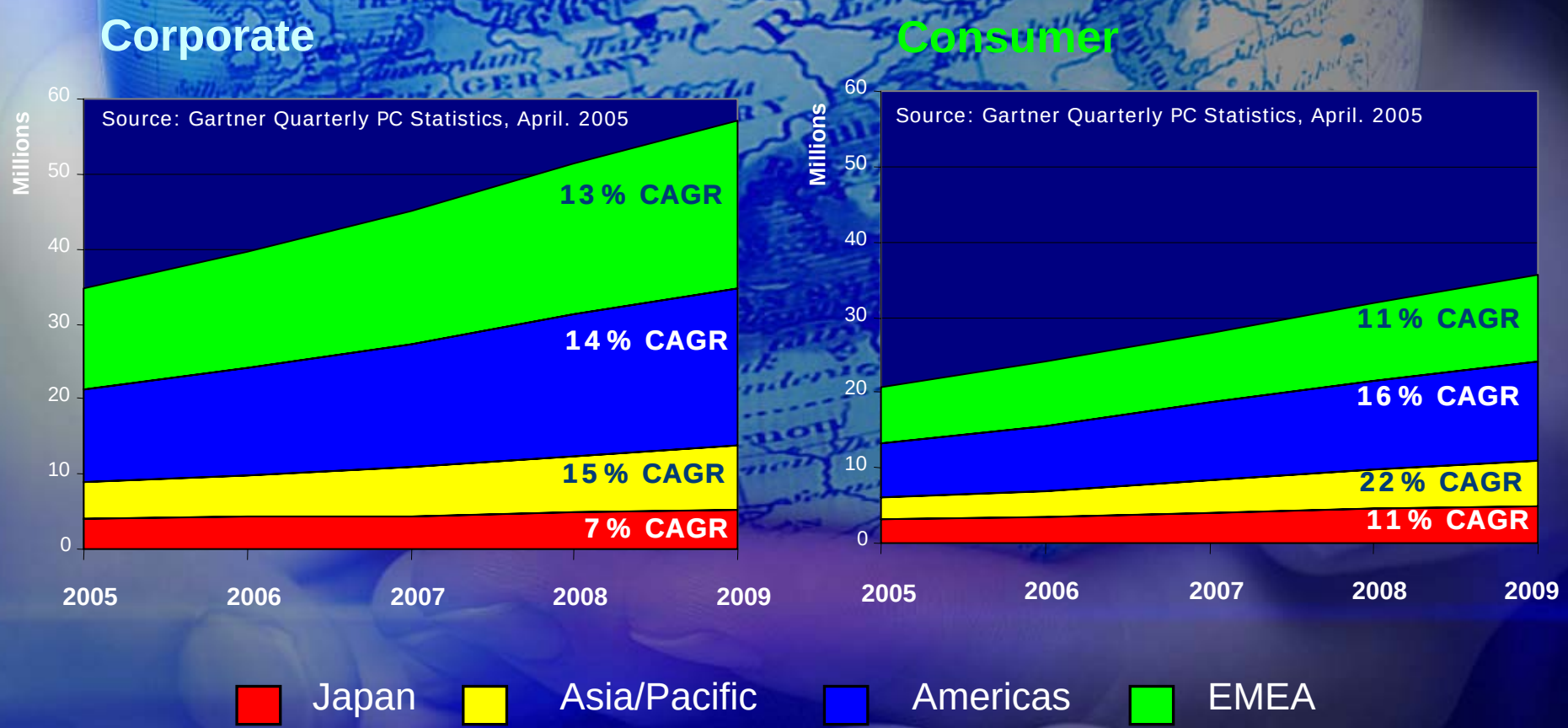


Platform Designs

- **150+ Sonoma '05**
- **120+ Napa '06 to date**

Source: Intel

Mobile PC Forecast by Geo/Segment



Napa: Technology for the End User

Performance

New

Yonah: 1st mobile 65nm DC
Intel® Smart Cache
Intel® Digital Media Boost
Calistoga: new chipset-enhanced integrated graphics

Battery Life

More

Integrated Graphics
EBL techniques
Intel® Dynamic Power Coordination



Thinner, Lighter

Golan: Minicard
Small Form Factor GMCH
Intel® Advanced Thermal Manager

Wireless

Support latest IEEE 802.11 standards
Cisco* Compatible Extensions

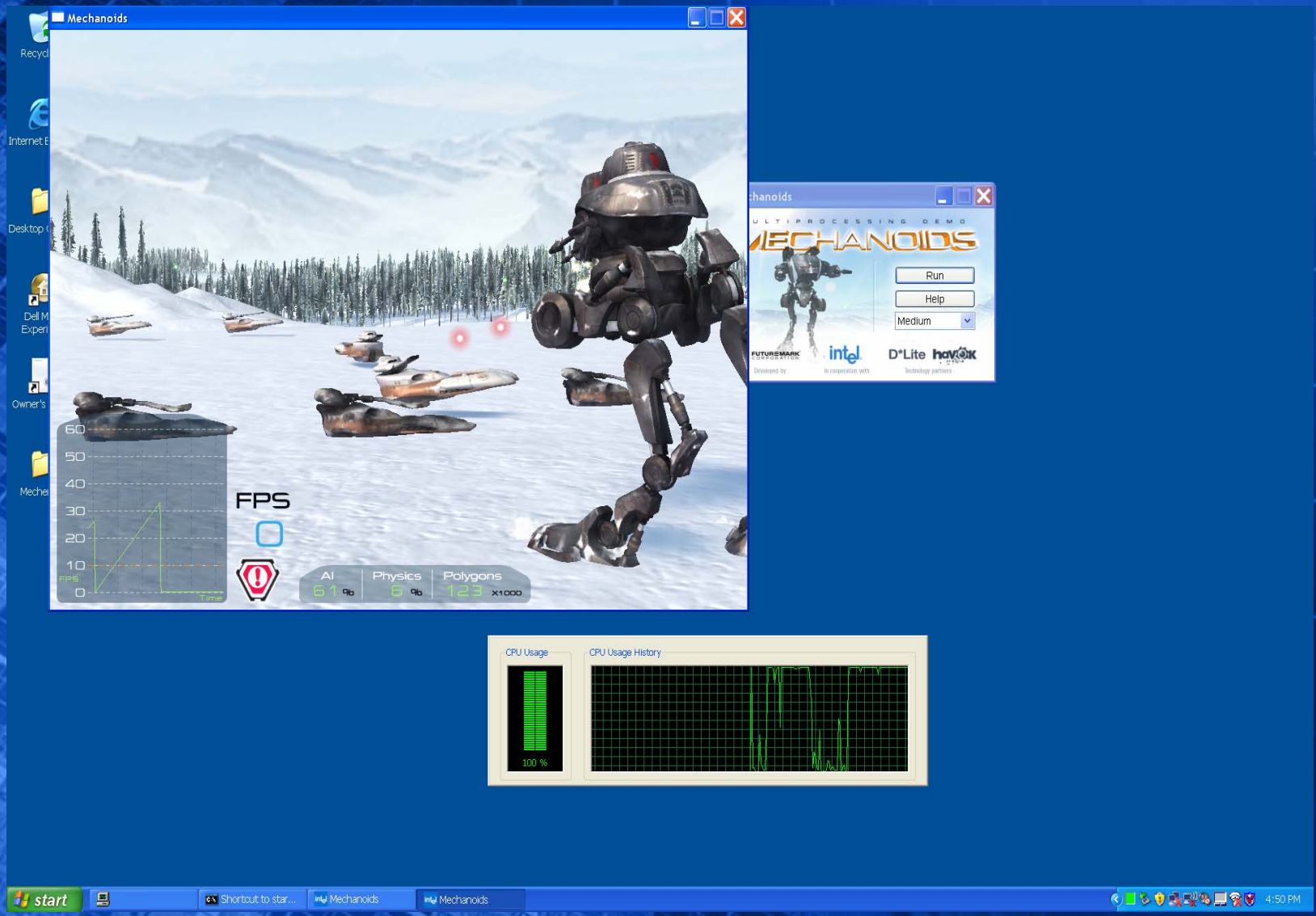
Security & Manageability

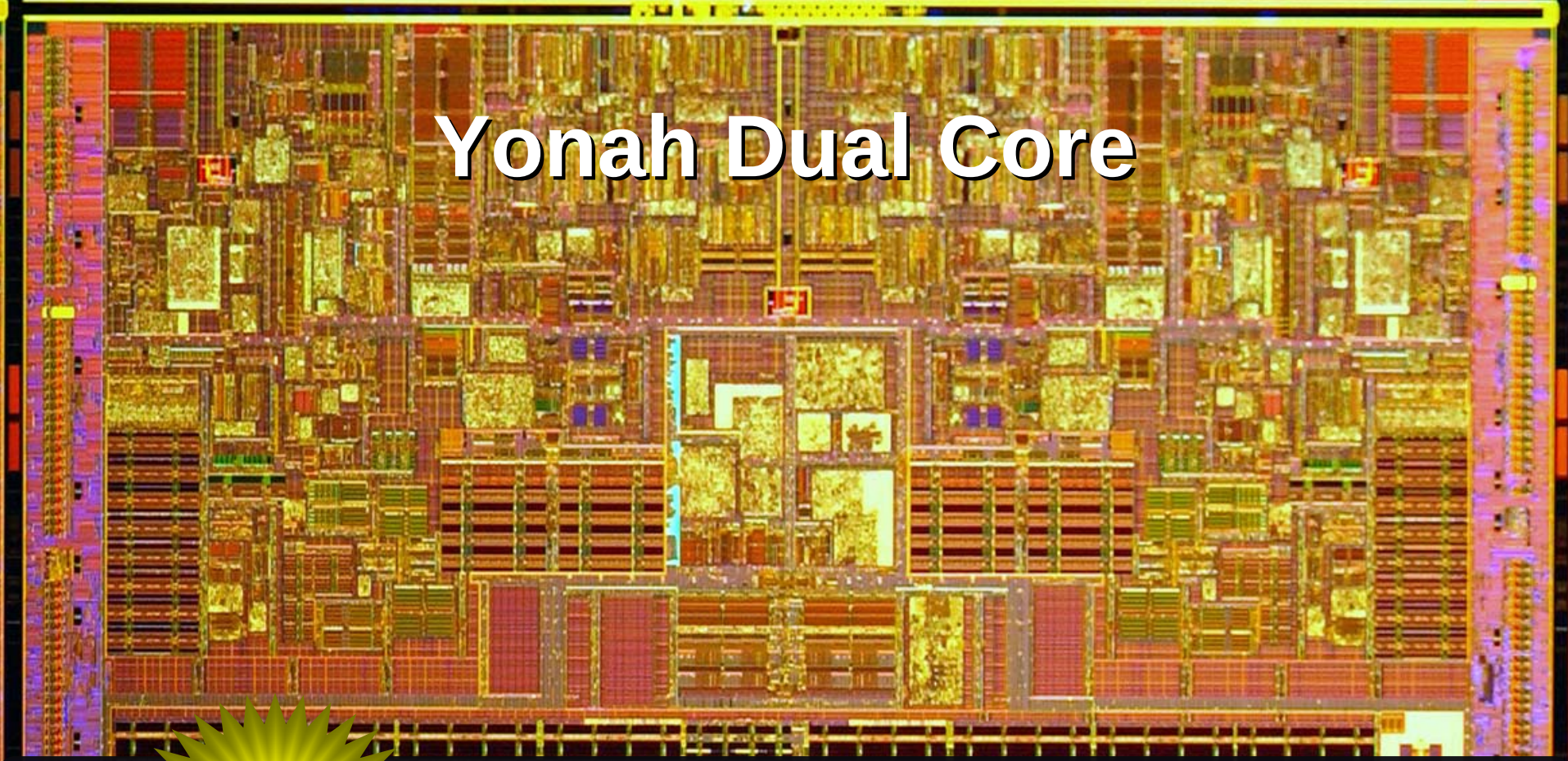
Intel® Virtualization Technology
Intel® Active Management Technology

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Next: Demo

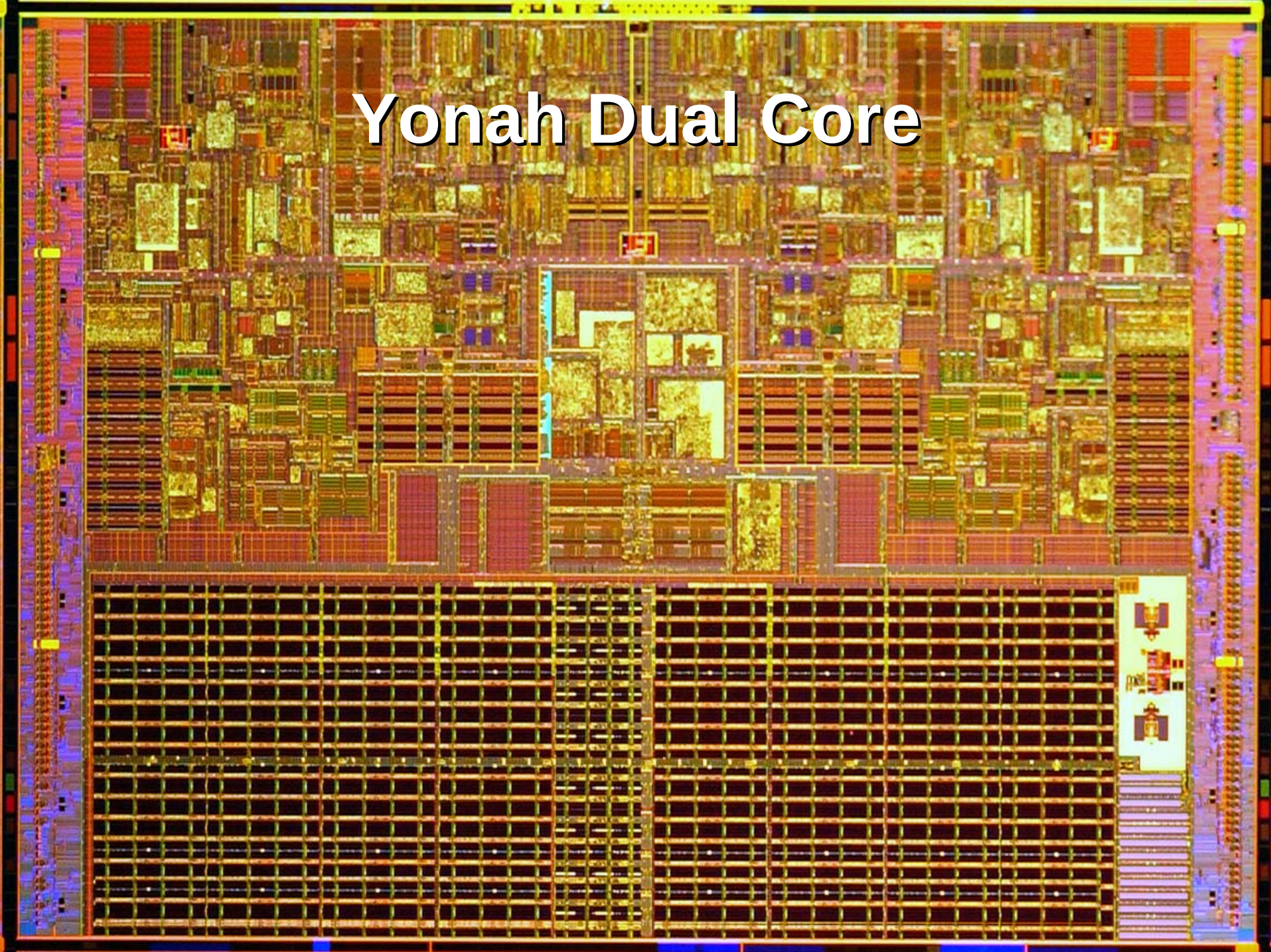
Mechanoids


Mechanoids
Run
Help
Medium
FPS
AI
Physics
Polygons
CPU Usage
CPU Usage History
start
Shortcut to star...
Mechanoids
Mechanoids
4:50 PM

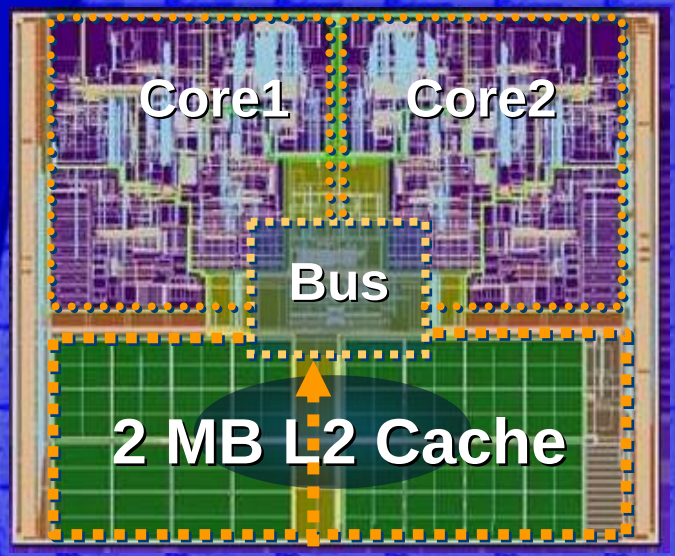


New

Intel's First Dual-Core Mobile Optimized CPU With Intel® Smart Cache


Yonah Dual Core

Yonah Dual Core



Implementation:

One piece of silicon

Two execution cores

One shared 2MB L2 cache

One shared bus

	Dual Core
L2 Cache	2MB shared
FSB	667 MHz
Execute Disable Bit	Yes
Socket	PGA 478 or BGA 479
Process technology	65nm
Transistors	151.6 million
Launch	Q1 '06

New

New

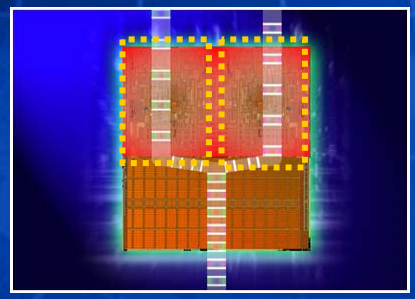
New

All products and dates are preliminary and subject to change without notice.

Mobile Dual-Core Advantage

Hyper-Threading Technology

- ONE execution core seen as “two logical processors”
- Parallel threads executed on a single core with **shared CPU resources**



Two execution cores on a single processor

Mobile Dual-Core Architecture

- TWO mobile optimized execution cores on a single processor
- Parallel threads executed on separate cores with **dedicated CPU resources**

Truly Parallel Multitasking & Multi-threaded Execution

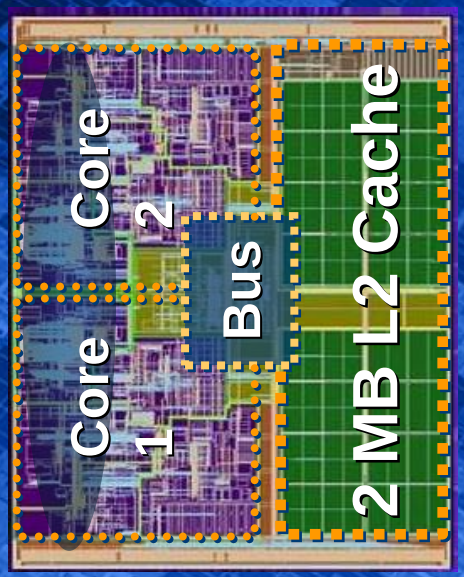
+

Ability to leverage the Intel® HT™ Technology ecosystem on mobile platforms

+

Intel enabling software vendors to write Dual-Core optimized applications

Yonah Dual-Core Processor with Intel® Smart Cache



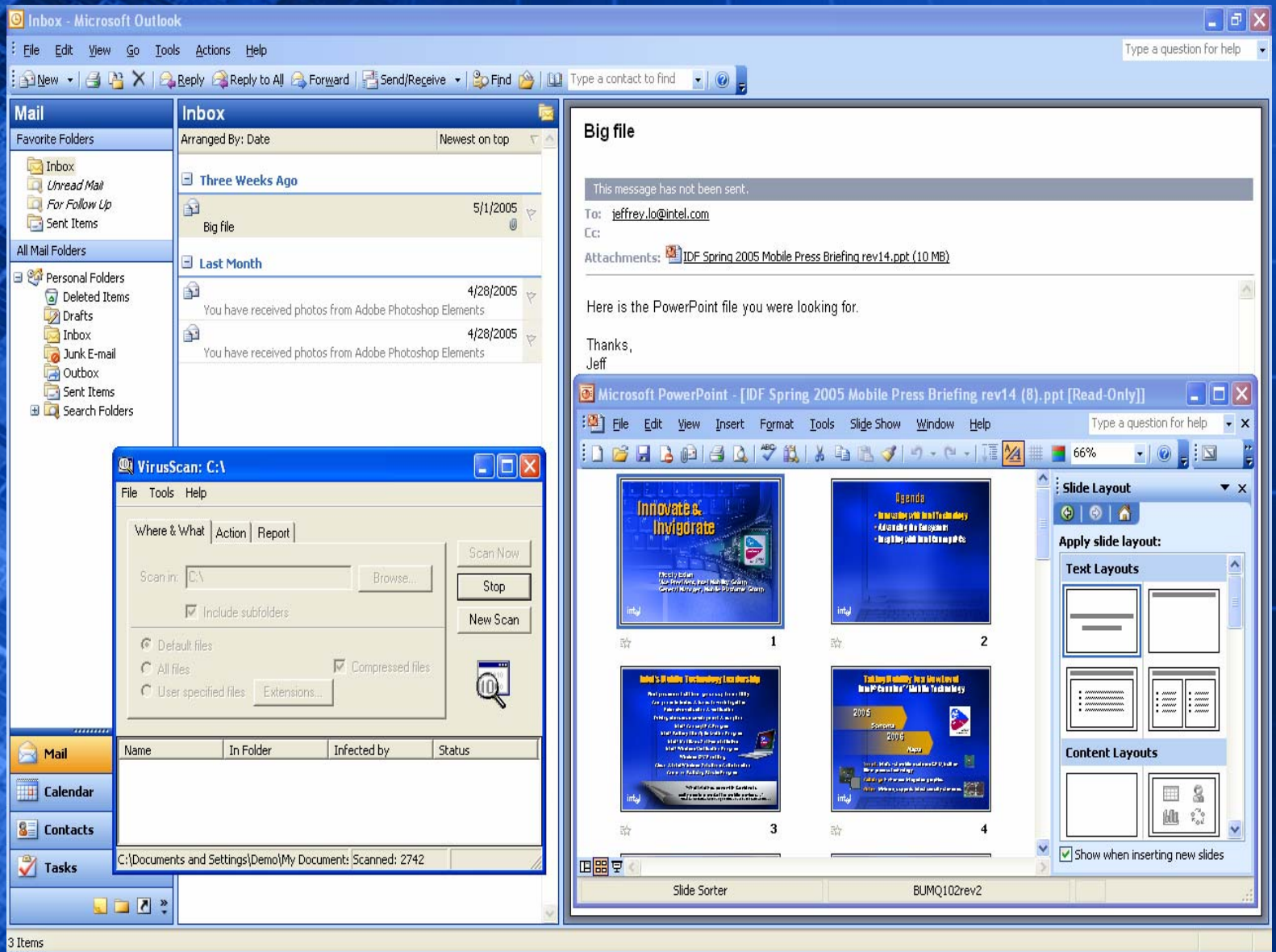
Intel® Smart Cache

- Shared L2 enables access to full cache size when only one core is active
- Shared L2 minimizes bus traffic by allowing both cores to access single copy of data
- L2 & DCU data pre-fetchers and deeper write output buffer for improved cache performance
- Shared Bus router enables cache resource optimization in single & dual-core mode
- Bandwidth Adaptation Buffer enables 2x average L2 bandwidth when both cores are active

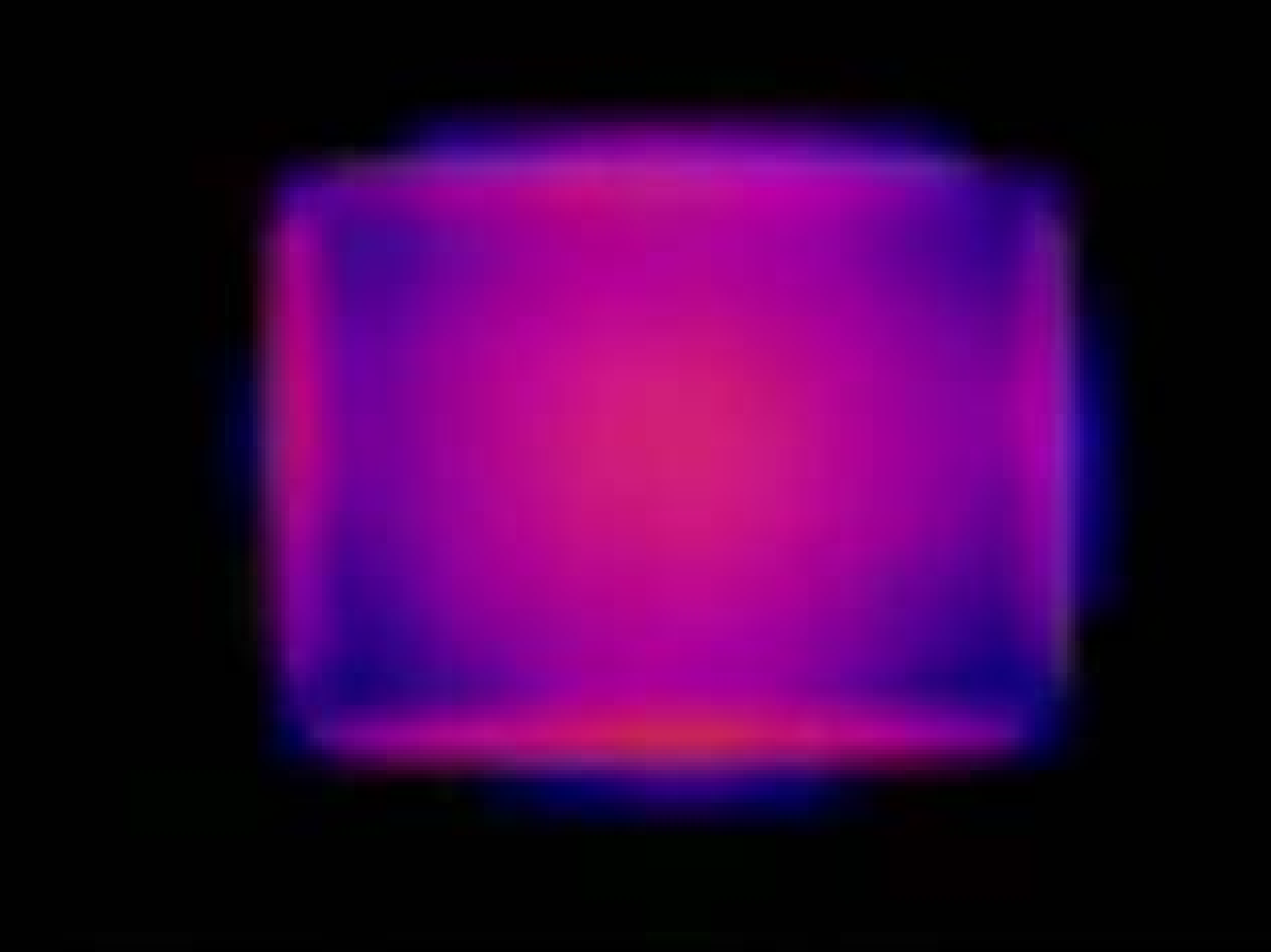
Smarter and Efficient Cache & Bus Design to enable better Performance, Responsiveness & Power Savings

Next: Demo

Multitasking

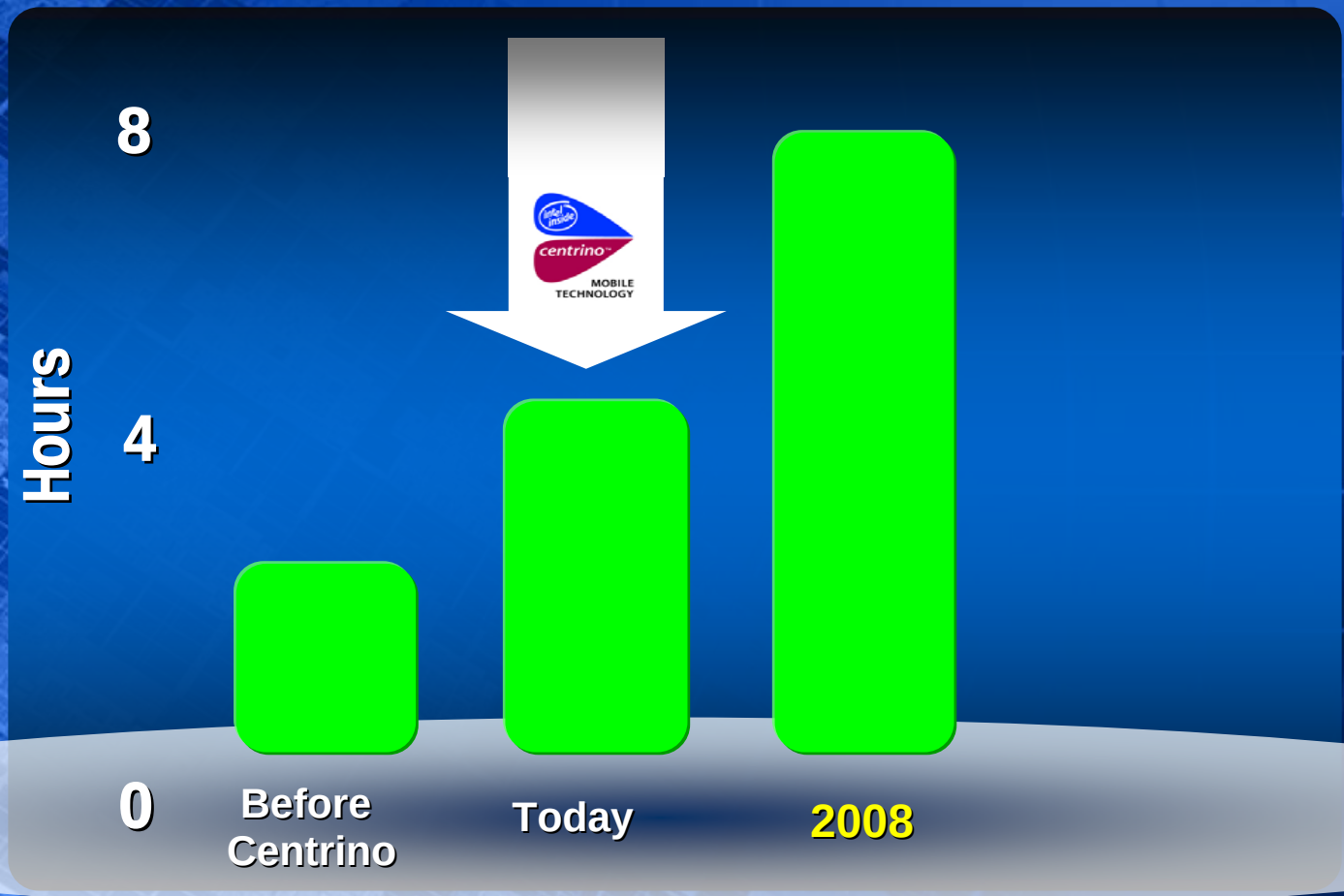


Intel® Dynamic Power Coordination



Battery Life Challenge

Last year's Vision: All day on a single charge by 2010



This Year's Vision: All day on a single charge by 2008

Bringing Intel Concept PC-Inspired Designs to Market

2005 Platforms

2006 Platforms



Intel will continue to inspire new designs and usage models

Summary

- Mobile ramp stronger than everyone expected
- Great traction on Napa designs
- Napa extends further 4 vectors of mobility
- Yonah Dual Core is a revolutionary processor